

REMARKS/ARGUMENTS

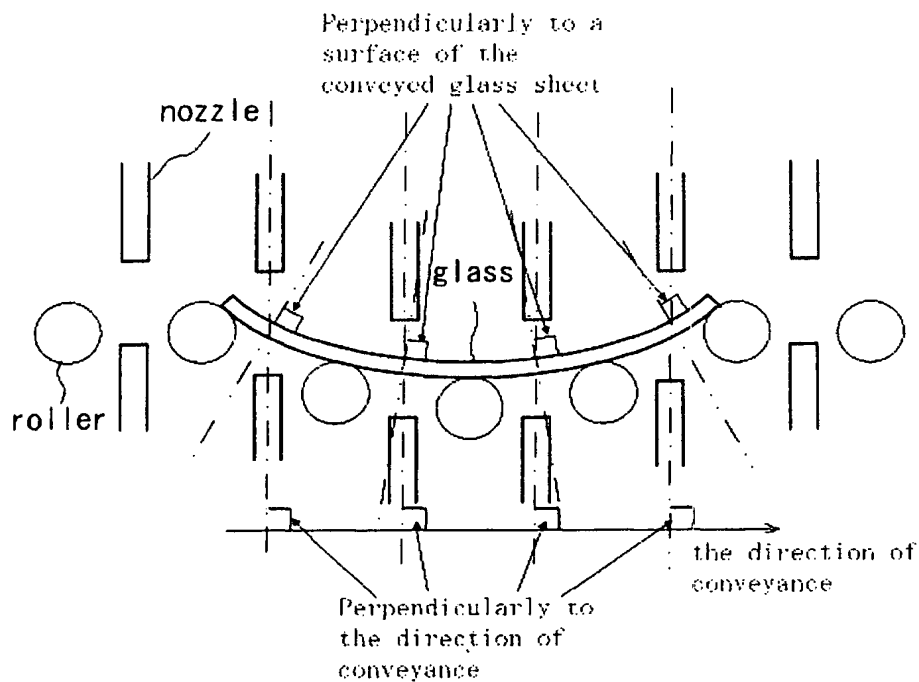
Favorable reconsideration of the present application is respectfully requested.

Claim 13 has been cancelled. The objection thereto is therefore moot.

Claim 8 has been amended to further recite a plurality of flow paths defining elements connected to each of the air-supply boxes in the upper and lower blowing members such that a plurality of flow paths of cooling air from the air supply boxes are connected to each of the air supply boxes. Basis for this is found in the ducts 108, 110 shown in Fig. 6. The significance of this further limitation is that a rotation operation of a damper in a *single* air supply box can be used to open or close *plural* flow paths. It is thus possible to control and coordinate the air flow in the plural flow paths during the blowing and stopping steps with a simpler structure since separate control of plural valves for the plural flow paths is not required.

That is, Applicants have recognized that the accurate control of the timing of cooling air blowing from adjacent blowing members is important, and so the control of the timing of the opening and closing of the dampers is important. Further, unless cooling air is supplied from a plurality of air supply ports to the blowing members simultaneously, a balance of the wind pressures of the cooling air blown from the blowing members may be lost. The construction of the present invention addresses these problems.

Claim 14 has also been slightly amended to clarify that the air nozzle is swingable in the conveying direction of the glass sheet “to change the direction of the blowing of the cooling air” in the conveying direction of the glass sheet. Thus the cooling air is blown perpendicularly to a surface of the conveyed glass sheet by swinging the air nozzle the conveying direction of glass sheet, as shown below:



Claims 8, 10 and 11 have been newly rejected under 35 U.S.C. § 103 as being obvious over Nemugaki et al in view of newly cited U.S. patent 5,494,254 (Dominka).

Nemugaki et al discloses a method for air-cooling glass sheets wherein glass sheets are cooled and tempered by an air-cooling/tempering device 16. As seen in Fig. 8, the device 16 has a plurality of air supply ports 130, 150 spaced in the conveying direction of a glass sheet. Moreover, Figs. 1 and 4 illustrate a plurality of supply ports 130, 150 spaced transverse to the conveying direction. Each of the supply ports 130, 150 has a *separate* damper 250 or 252. Thus Nemugaki et al teaches separate dampers for each of a plurality of cooling air flow paths. Control of the dampers for blowing and stopping steps is therefore complicated since each of the separate dampers must be individually controlled.

Amended Claim 8 therefore differs from Nemugaki et al not only in that Nemugaki et al fails to teach the use of the claimed cylindrical dampers, but in that Nemugaki et al also teaches the use of a separate damper for each of the flow paths, and not the presently claimed dampers in air supply boxes which each have a plurality of flow paths.

Dominka was cited to teach a rotary damper. However the damper in Dominka is not taught as being provided in an air supply box used in air cooling and tempering. Therefore, Dominka could not suggest modifying Nemugaki et al to provide dampers in air supply boxes having a plurality of flow paths. The claims therefore define over any combination of these references.

Claim 14 recites that the blowing member comprises an air-nozzle swingable in the conveying direction of the glass sheet to change the direction of the blowing of the cooling air in the conveying direction of the glass sheet. An example of this is seen in Figure 4 wherein the air-nozzles 25 are mounted to swing in the direction of movement of the glass sheet. The cooling air is thereby blown perpendicularly to a surface of the conveyed glass sheet by swinging the air nozzle.

Claim 14 was newly rejected under 35 U.S.C. § 103 as being obvious over Nemugaki et al in view of newly cited U.S. patent 5,846,281 (Nikander). As previously explained, Nemugaki et al simply discloses vertical movement of air-blowing heads coordinated with the movement of the glass sheets. See, for example, Figure 9 at (B)-(F) wherein the blowing heads 24 and 26 are moved vertically in coordination with the movement of the glass sheets through the cooling/tempering device. This is a rectilinear movement, and not swinging, of the air blowing heads. There is no teaching or suggestion that air-nozzles of the blowing heads are swingable, particularly “in the conveying direction of” the glass sheet. To further clarify this distinction, Claim 14 has been amended to further recite that the air-nozzle is swingable in the conveying direction of the glass sheet “to change the direction of the blowing of the cooling air” in the conveying direction of the glass sheet.

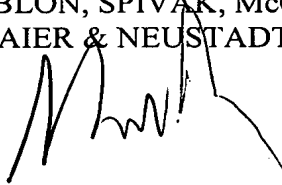
As for Nikander, the tilting of the nozzles 2n shown in the figures of this reference is done in the *widthwise* direction of the glass sheet, i.e., in a direction *transverse* to the conveying direction and *not* in the conveying direction of the glass sheet to change the

direction of the blowing of the cooling air in the conveying direction of the glass sheet. Thus Nikander could not teach modifying Nemugaki et al such that the nozzles thereof are swingable in the conveying direction of the glass sheet to change the direction of the blowing of the cooling air in the conveying direction of the glass sheet.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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